

+3 M A D  
1 CACCGGCGAA GGAGGATCGA ATTCCTGCAG CCCGCTATCT GCAGGCCGCG ACCATGGCCG  
GTGGCCGCTT CCTCCTAGCT TAAGGACGTC GGGCGATAGA CGTCCGCGCG TGGTACCGGC  
+3 .D Y L I S G G T S Y V P D D G L T A Q Q L  
61 ACTACCTGAT TAGTGGGGGC ACGTCCTACG TGCCAGACGA CGGACTCACA GCACAGCAGC  
TGATGGACTA ATCACCCCGG TGCAGGATGC ACGGTCTGCT GCCTGAGTGT CGTGTCTGTCG  
+3 .L F N C G D G L T Y N D F L I L P G Y I D  
121 TCTTCAACTG CGGAGACGGC CTCACCTACA ATGACTTTCT CATTCTCCCT GGGTACATCG  
AGAAGTTGAC GCCTCTGCCG GAGTGGATGT TACTGAAAGA GTAAGAGGGA CCCATGTAGC  
+3 .D F T A D Q V D L T S A L T K K I T L K T  
181 ACTTCACTGC AGACCAGGTG GACCTGACTT CTGCTCTGAC CAAGAAAATC ACTCTTAAGA  
TGAAGTGACG TCTGGTCCAC CTGGACTGAA GACGAGACTG GTTCTTTTAG TGAGAATTCT  
+3 .T P L V S S P M D T V T E A G M A I A M A  
241 CCCCCTGGT TTCCTCTCCC ATGGACACAG TCACAGAGGC TGGGATGGCC ATAGCAATGG  
GGGGTGACCA AAGGAGAGGG TACCTGTGTC AGTGTCTCCG ACCCTACCGG TATCGTTACC  
+3 .A L T G G I G F I H H N C T P E F Q A N E  
301 CGCTTACAGG CGGTATTGGC TTCATCCACC ACAACTGTAC ACCTGAATTC CAGGCCAATG  
GCCAATGTCC GCCATAACCG AAGTAGGTGG TGTGACATG TGGACTTAAG GTCCGGTTAC  
+3 .E V R K V K K Y E Q G F I T D P V V L S P  
361 AAGTTCGGAA AGTGAAGAAA TATGAACAGG GATTTCATCAC AGACCTGTG GTCCTCAGCC  
TTCAAGCCTT TCACTTCTTT ATACTTGTCC CTAAGTAGTG TCTGGACAC CAGGAGTCCG  
+3 .P K D R V R D V F E A K A R H G F C G I P  
421 CCAAGGATCG CGTGCGGGAT GTTTTTGAGG CCAAGGCCCG GCATGGTTTC TCGGTATCC  
GGTTCCTAGC GCACGCCCTA CAAAACTCC GGTCCGGGC CGTACC AAAG ACCCCATAGG  
+3 .P I T D T G R M G S R L V G I I S S R D I  
481 CAATCACAGA CACAGGCCGG ATGGGGAGCC GCTTGGTGGG CATCATCTCC TCCAGGGACA  
GTTAGTGTCT GTGTCCGGCC TACCCCTCGG CGAACCACCC GTAGTAGAGG AGGTCCCTGT  
+3 .I D F L K E E E H D C F L E E I M T K R E  
541 TTGATTTTCT CAAAGAGGAG GAACATGACT GTTCTTTGGA AGAGATAATG ACAAAGAGGG  
AACTAAAAGA GTTTCTCCTC CTTGTACTGA CAAAGAACCT TCTCTATTAC TGTCTCTCCC  
+3 .E D L V V A P A G I T L K E A N E I L Q R  
601 AAGACTTGGT GGTAGCCCTT GCAGGCATCA CACTGAAGGA GGCAAATGAA ATTCTGCAGC  
TTCTGAACCA CCATCGGGGA CGTCCGTAGT GTGACTTCCT CCGTTTACTT TAAGACGTCC  
+3 .R S K K G K L P I V N E D D E L V A I I A  
661 GCAGCAAGAA GGGAAAGTTG CCCATTGTAA ATGAAGATGA TGAGCTTGTG GCCATCATTC  
CGTCTGTTCTT CCCTTTC AAC GGGTAACATT TACTTCTACT ACTCGAACAC CGGTAGTAAC  
+3 .A R T D L K K N R D Y P L A S K D A K K Q  
721 CCCGGACAGA CCTGAAGAAC AATCGGGACT ACCCACTAGC CTCCAAAGAT GCCAAGAAAC  
GGGCCTGTCT GGACTTCTTC TTAGCCCTGA TGGGTGATCG GAGGTTTCTA CGGTCTTTG  
+3 .Q L L C G A A I G T H E D D K Y R L D L L  
781 AGCTGCTGTG TGGGGCAGCC ATTGGCACTC ATGAGGATGA CAAGTATAGG CTGGACTTGC  
TCGACGACAC ACCCGTCTCG TAACCGTGAG TACTCCTACT GTTCATATCC GACCTGAACG  
+3 .L A Q A G V D V V V L D S S Q G N S I F Q  
841 TCGCCCAGGC TGGTGTGGAT GTAGTGGTTT TGGACTCTTC CCAGGGAAAT TCCATCTTCC  
AGCGGGTCCG ACCACACCTA CATCACAAA ACCTGAGAAG GGTCCCTTTA AGGTAGAAGG  
+3 .Q I N M I K Y I K D K Y P N L Q V I G G N  
901 AGATCAATAT GATCAAGTAC ATCAAAGACA AATACCCTAA TCTCCAAGTC ATTGGAGGCA  
TCTAGTTATA CTAGTTCATG TAGTTTCTGT TTATGGGATT AGAGGTTTCAG TAACCTCCGT

FIG 1A

SELECTION SYSTEMS FOR GENETICALLY  
MODIFIED CELLS

DOCKET NO. 24751-2502

Applicant: Jensen

Filed: April 30, 2001

+3 .N V V T A A Q A K N L I D A Q V D A L R V  
1961 ATGTGGTCAC TGCTGCCCAG GCCAAGAACC TCATTGATGC AGGTGTGGAT GCCCTGCGGG  
TACACCAGTG ACGACGGGTC CGGTTCTTGG AGTAACACG TCCACACCTA CGGGACGCCC  
+3 .V G M G S G S I C I I Q E V L A C G R P Q  
1021 TGGGCATGGG AAGTGGCTCC ATCTGCATTA TCCAGGAAGT GCTGGCCTGT GGGCGGCCCC  
ACCCGTACCC TTCACCGAGG TAGACGTAAT AGGTCTTCA CGACCGGACA CCGCGCGGGG  
+3 .Q A T A V Y K V Y E Y A R R F G V P V I A  
1081 AAGCAACAGC AGTGTACAAG GTGTATGAGT ATGCACGGCG CTTTGGTGT TCCGGTCATTG  
TTCGTTGTTCG TCACATGTTT CACATACTCA TACGTGCCGC GAAACCACAA GCGCAGTAAC  
+3 .A D G G I Q N V G H I A K A L A L G A S T  
1141 CTGATGGAGG AATCCAAAT GTGGGTCATA TTGCGAAAGC CTTGGCCCTT GGGGCTCCA  
GACTACCTCC TTAGGTTTTA CACCCAGTAT AACGCTTTCG GAACCGGGAA CCGCGGAGGT  
+3 .T V M M G S L L A A T T E A P G E Y F F S  
1201 CAGTCATGAT GGGCTCTCTC CTGGCTGCCA CCACTGAGGC CCCTGGTGAA TACTTCTTTT  
GTCAGTACTA CCGGAGAGAG GACCGACGGT GGTGACTCCG GGGACCACTT ATGAAGAAAA  
+3 .S D G I R L K K Y R G M G S L D A M D K H  
1261 CCGATGGGAT CCGGCTAAAG AAATATCGCG GTATGGGTTT TCTCGATGCC ATGGACAAGC  
GGCTACCCTA GGCCGATTTT TTTATAGCGC CATACCCAAG AGAGCTACCG TACCTGTTTCG  
+3 .H L S S Q N R Y F S E A D K I K V A Q G V  
1321 ACCTCAGCAG CCAGAACAGA TATTTTCAGTG AAGCTGACAA AATCAAAGTG GCCCAGGGAG  
TGGAGTCGTC GGTCTTGTCT ATAAAGTCAC TTCGACTGTT TTAGTTTCAC CCGGTCCCTC  
+3 .V S G A V Q D K G S I H K F V P Y L I A G  
1381 TGTCTGGTGC TGTGCAGGAC AAAGGGTCAA TCCACAAATT TGTCCCTTAC CTGATTGCTG  
ACAGACCACG ACACGTCCTG TTTCCAGTT AGGTGTTTAA ACAGGGAATG GACTAACGAC  
+3 .G I Q H S C Q D I G A K S L T Q V R A M M  
1441 GCATCCAACA CTCATGCCAG GACATTGGTG CCAAGAGCTT GACCCAAGTC CGAGCCATGA  
CGTAGGTTGT GAGTACGGTC CTGTAACCAC GGTCTCTGAA CTGGGTTTAC GCTCGGTACT  
+3 .M Y S G E L K F E K R T S S A Q V E G G V  
1501 TGTACTCTGG GGAGCTTAAG TTTGAGAAGA GAACGTCCTC AGCCCAGGTG GAAGGTGGCG  
ACATGAGACC CCTCGAATTC AAACCTCTCT CTTGCAGGAG TCGGCTCCAC CTTCCACCGC  
+3 .V H S L H S Y E K R L F  
1561 TCCATAGCCT CCATTCTGAT GAGAAGCGGC TTTTCTGATC TAGCTCGACA TGATAAGATA  
AGGTATCGGA GGTAAGCATA CTCTTCGCGG AAAAGACTAG ATCGAGCTGT ACTATTCTAT  
1621 CATTGATGAG TTTGGACAAA CCACAACCTAG AATGCAGTGA AAAAAATGCT TTATTGTGA  
GTAACCTACT AAACCTGTTT GGTGTTGATC TTACGTCAC TTTTTCACGA AATAAACACT  
1681 AATTTGTGAT GCTATTGCTT TATTTGTGAA ATTTGTGATG CTATTGCTTT ATTTGTAACC  
TTAAACACTA CGATAACGAA ATAAACACTT TAAACACTAC GATAACGAAA TAAACATTGG  
1741 ATTATAAGCT GCAATAAACA AGTTAACAAC AACAAATTGCA TTCATTTTAT GTTTCAGGTT  
TAATATTCTGA CGTTATTTGT TCAATTGTTG TTGTTAACGT AAGTAAAATA CAAAGTCCAA  
1801 CAGGCGGAGG TGTGGGAGGT TTTTAAAGC AAGTAAAACC TCTACAAATG TGGTAGATCA  
GTCCCCCTCC ACACCCTCCA AAAAATTTTCG TTCATTTTGG AGATGTTTAC ACCATCTAGT  
1861 TTTAAATGTT ACGGAAGAAC ATGTGAGCAA AAGGCCAGCA AAAGGCCAGG AACCCTAAAA  
AAATTTACAA TCGCTTCTTG TACACTCGTT TTCCGGTTCG TTTCCGGTCC TTGGCATTTT  
1921 AGGCGCGGTT GCTGGCGTTT TTCCATAGGC TCCGCCCCC TGACGAGCAT CACAAAAATC  
TCCGCGCGAA CGACCGCAAA AAGGTATCCG AGGCGGGGGG ACTGCTCGTA GTGTTTTTAG  
1981 GACGCTCAAG TCAGAGGTGG CGAAACCCGA CAGGACTATA AAGATACCAG GCGTTTCCCC  
CTGCGAGTTC AGTCTCCACC GCTTTGGGCT GTCCTGATAT TTCTATGGTC CGCAAAGGGG

FIG 1B

SELECTION SYSTEMS FOR GENETICALLY  
MODIFIED CELLS

DOCKET NO. 24751-2502

Applicant: Jensen

Filed: April 30, 2001

HELLER EHRMAN WHITE &amp; MCAULIFFE LLP

2041 CTGGAAGCTC CCTCGTGCGC TCTCCTGTTT CGACCCCTGCC GCTTACCGGA TACCTGTCCG  
GACCTTCGAG GGAGCACGCG AGAGGACAAG CTTGGGACCG CGAATGGCCT ATGGACAGGC

2101 CCTTTCTCCC TTGGGAAGC GTGGCGCTTT CTCAATGCTC ACGCTGTAGG TATCTCAGTT  
GGAAAGAGGG AAGCCCTTCG CACCGCGAAA GAGTTACGAG TCGGACATCC ATAGAGTCAA

2161 CGGTGTAGGT CGTTCGCTCC AAGCTGGGCT GTGTGCACGA ACCCCCCGTT CAGCCCCGACC  
GCCACATCCA GCAAGCGAGG TTCGACCCGA CACACGTGCT TGGGGGGCAA GTCGGGCTGG

2221 GCTGCGCCTT ATCCGGTAAC TATCGTCTTG AGTCCAACCC GGTAAGACAC GACTTATCGC  
CGACGCGGAA TAGGCCATTG ATAGCAGAAC TCAGGTGGG CCATTCTGTG CTGAATAGCG

2281 CACTGGCAGC AGCCACTGGT AACAGGATTA GCAGAGCGAG GTATGTAGGC GGTGCTACAG  
GTGACCGTCG TCGGTGACCA TTGTCTTAAT CGTCTCGCTC CATACTCCG CCACGATGTC

2341 AGTTCTTGAA GTGGTGGCCT AACTACGGCT AACTAGAAAG AACAGTATTT GGTATCTGCG  
TCAAGAATT CACCACCGGA TTGATGCCGA TGTGATCTTC TTGTCATAAA CCATAGACGC

2401 CTCTGCTGAA GCCAGTTACC TTCGGAAAAA GAGTTGGTAG CTCTTGATCC GGC AAAACAAA  
GAGACGACTT CGGTCAATGG AAGCCTTTTT CTCAACCATC GAGAACTAGG CCGTTTGT

2461 CCACCGCTGG TAGCGGTGGT TTTTTTGTTC GCAAGCAGCA GATTACGCGC AGAAAAAAG  
GGTGGCGACC ATCGCCACCA AAAAAACAAA CGTTCGTCTG CTAATGCGCG TCTTTTTTTC

2521 GATCTCAAGA AGATCCTTTG ATCTTTTCTA CGGGGTCTGA CGCTCAGTGG AACGAAAAC  
CTAGAGTTCT TCTAGGAAAC TAGAAAAGAT GCGCCAGACT GCGAGTCACC TTGCTTTTGA

2581 CACGTAAAGG GATTTTGGTC ATGGCTAGTT AATTAAGCTG CAATAAACAA TCATTATTTT  
GTGCAATTCC CTAAAACCAG TACCGATCAA TTAATTCGAC GTTATTTGTT AGTAATAAAA

2641 CATTGGATCT GTGTGTTGGT TTTTGTGTG GGCTTGGGG AGGGGGAGGC CAGAATGACT  
GTAACCTAGA CACACAACCA AAAAACACAC CCGAACCCCT TCCCTCCG GTCTTACTGA

2701 CCAAGAGCTA CAGGAAGGCA GGTGAGAGC CCCACTGGAC AAACAGTGGC TGGACTCTGC  
GGTTCTCGAT GTCTTCCGT CCAGTCTCTG GGTGACCTG TTTGTCACCG ACCTGAGACG

2761 ACCATAACAC ACAATCAACA GGGGAGTGAG CTGGATCGAG CTAGAGTCCG TTACATAACT  
TGGTATTGTG GTTTAGTTGT CCCCTCACTC GACCTAGCTC GATCTCAGGC AATGTATTGA

2821 TACGGTAAAT GGCCCGCCTG GCTGACCGCC CAACGACCCC CGCCCATTTGA CGTCAATAAT  
ATGCCATTTA CCGGGCGGAC CGACTGGCGG GTTGCTGGGG GCGGGTAACT GCAGTTATTA

2881 GACGTATGTT CCCATAGTAA CGCCAATAGG GACTTTCCAT TGACGTCAAT GGGTGGAGTA  
CTGCATACAA GGGTATCATT GCGGTTATCC CTGAAAGGTA ACTGCAGTTA CCCACCTCAT

2941 TTTACGGTAA ACTGCCCACT TGGCAGTACA TCAAGTGTAT CATATGCCAA GTACGCCCCC  
AAATGCCATT TGACGGGTGA ACCGTCATGT AGTTCACATA GTATACGGTT CATGCGGGGG

3001 TATTGACGTC AATGACGGTA AATGGCCCCG CTGGCATTAT GCGCAGTACA TGACCTTATG  
ATAACTGCAG TTAAGTCCAT TTACCGGGCG GACCGTAATA CCGGTCATGT ACTGGAATAC

3061 GGACTTTTCT ACTTGGCAGT ACATCTACGT ATTAGTCATC GCTATTACCA TGGTGTATGC  
CCTGAAAGGA TGAACCGTCA TGTAGATGCA TAATCAGTAG CGATAATGGT ACCACTACGC

3121 GTTTTGGCAG TACATCAATG GCGGTGGATA GCGGTTTGAC TCACGGGGAT TTCCAAGTCT  
CAAAACCGTC ATGTAGTTAC CCGACCTAT CGCCAACTG AGTGGCCCTA AAGGTTTACA

3181 CCACCCCATTT GACGTCAATG GGAGTTTGTG TTGGCACCAA AATCAACGGG ACTTTCCAAA  
GGTGGGGTAA CTGCAGTTAC CCTCAAACAA AACCCTGGTT TTAGTTGCCC TGAAAGGTTT

3241 ATGTCGTAAC AACTCCGCCC CATTGACGCA AATGGGCGGT AGGCGTGTAC GGTGGGAGGT  
TACAGCATTG TTGAGGCGGG GTAAGTGGT TTACCGGCA TCCGCACATG CCACCTCCA

3301 CTATATAAGC AGAGCTCGTT TAGTGAACCG TCAGATCGCC TGGAGACGCC ATCCACGCTG  
GATATATTCT TCTCGAGCAA ATCACTGGC AGTCTAGCGG ACCTCTGCGG TAGGTGCGAC

3361 TTTTGACCTC CATAGAAGAC ACCGGGACCG ATCCAGCCTC CGCGGCCGGG AACGGTGCAT  
AAAACCTGGAG GTATCTTCTG TGGCCCTGGC TAGGTGCGAG GCGCGGGCCC TTGCCACGTA

FIG 1C

## SELECTION SYSTEMS FOR GENETICALLY

## MODIFIED CELLS

DOCKET NO. 24751-2502

Applicant: Jensen

Filed: April 30, 2001

3421 TGAACGCGG ATTCCTCGTG CCAAGAGTGA CGTAAGTACC GCCTATAGAG TCTATAGGCC  
ACCTTGCGCC TAAGGGGCAC GGTTCCTCACT GCATTCATGG CCGATATCTC AGATATCCGG

3481 CACCCCTTG GCTTCTTATG CATGCTATAC TGTTTTTGGC TTGGGGTCTA TACACCCCCG  
GTGGGGGAAC CGAAGAATAC GTACGATATG AAAAAACCG ACCCCAGAT ATGTGGGGGC

3541 CTTCTCATG TTATAGGTGA TGGTATAGCT TAGCCTATAG GTGTGGGTTA TTGACCATTA  
GAAGGAGTAC AATATCCACT ACCATATCGA ATCGGATATC CACACCAAT AACTGGTAAT

3601 TTGACCACTC CCCTATTGGT GACGATACTT TCCATTACTA ATCCATAACA TGGCTCTTTG  
AACTGGTGAG GGGATAACCA CTGCTATGAA AGGTAATGAT TAGGTATTGT ACCGAGAAAC

3661 CCACAACCTC CTTTATTGGC TATATGCCAA TACACTGTCC TTCAGAGACT GACACGGACT  
GGTGTGAGA GAAATAACCG ATATACGGTT ATGTGACAGG AAGTCTCTGA CTGTCCCTGA

3721 CTGTATTTTT ACAGGATGGG GTCTCATTTA TTATTTACAA ATTACATAT ACAACACCAC  
GACATAAAAA TGTCCTACCC CAGAGTAAAT AATAAATGTT TAAGTGATA TGTGTGGTG

3781 CGTCCCGAGT GCGCGCAGTT TTTATTAAAC ATAACGTGGG ATCTCCACGC GAATCTCGGG  
GCAGGGGTCA CCGCGCTCAA AAATAATTTG TATTGCACCC TAGAGGTGCG CTAGAGCCCC

3841 TACGTGTTCC GGACATGGGC TCTTCTCCGG TAGCGCGCGA GCTTCTACAT CCGAGCCCTG  
ATGCACAAGG CCTGTACCCG AGAAGAGGCC ATCGCCGCTT CGAAGATGTA GGCTCGGGAC

3901 CTCCCATGCC TCCAGCGACT CATGGTCGCT CGGCAGCTCC TTGCTCCTAA CAGTGGAGGC  
GAGGGTACGG AGGTCGCTGA GTACCAGCGA GCGTCGAGG AACGAGGATT GTCACCTCCG

3961 CAGACTTAGG CACAGCACGA TGCCACCAC CACCAGTGTG CCGCACAGG CCGTGGCGGT  
GTCTGAATCC GTGTGCTGCT ACGGGTGGTG GTGGTCACAC GCGGTGTTCC GGCACGCCCA

4021 AGGGTATGTG TCTGAAAATG AGCTCGGGGA GCGGGCTTGC ACCGCTGACG CATTTGGAAG  
TCCCATACAC AGACTTTTAC TCGAGCCCTT CCGCCGAACG TGGCGACTGC GTAAACCTTC

4081 ACTTAAGGCA GCGGCAGAAG AAGATGCAGG CAGCTGAGTT GTTGTGTTCT GATAAGAGTC  
TGAATTCGGT CCGCGTCTTC TTCTACGTCC GTCGACTCAA CAACACAAGA CTATTCTCAG

4141 AGAGGTAAGT CCGGTGCGG TGCTGTTAAC GGTGGAGGGC AGTGTAGTCT GAGCAGTACT  
TCTCCATTGA GGGCAACGCC ACGACAATTG CCACCTCCCG TCACATCAGA CTCGTCTGTA

4201 CGTTGCTGCC GCGCGCGCCA CCAGACATAA TAGCTGACAG ACTAACAGAC TGTTCCTTTC  
GCAACGACGG CCGCGCGCGT GGTCTGTATT ATCGACTGTC TGATTGTCTG ACAAGGAAAG

MCS

4261 CATGGGTCTT TTCTGCAGTC ACCCGGGGGA TCCTTCGAAC GTAGCTCTAG ATTGAGTCGA  
GTACCCAGAA AAGACGTCAG TGGGCCCCCT AGGAAGCTTG CATCGAGATC TAACTCAGCT

4321 CGTTACTGGC CGAAGCCGCT TGAATAAAG CCGGTGTGCG TTTGTCTATA TGTTATTTTC  
GCAATCACC GCTTCGGCGA ACCTTATTCC GGCCACACGC AAACAGATAT ACAATAAAAG

4381 CACCATATTG CCGTCTTTTG GCAATGTGAG GGCCCGGAAA CCTGGCCCTG TCTTCTTGAC  
GTGGTATAAC GGCAGAAAAC CGTTACACTC CCGGGCCTTT GGACCGGGAC AGAAGAACTG

4441 GAGCATTCTT AGGGGTCTTT CCCCTCTCGC CAAAGGAATG CAAGGTCTGT TGAATGTCGT  
CTCGTAAGGA TCCCCAGAAA GGGGAGAGCG GTTTCCTTAC GTTCCAGACA ACTTACAGCA

4501 GAAGGAAGCA GTTCTCTGG AAGCTTCTTG AAGACAAACA ACGTCTGTAG CGACCCCTTG  
CTTCTTCTGT CAAGGAGACC TTCGAAGAAC TTCTGTTTGT TGCAGACATC GCTGGGAAAC

4561 CAGGCAGCGG AACCCCCAC CTGGCGACAG GTGCCTCTGC GGCCAAAAGC CACGTGTATA  
GTCCGTCGCC TTGGGGGGTG GACCGCTGTC CACGGAGACG CCGGTTTTTC GTGCACATAT

4621 AGATACACCT GCAAAGGCGG CACAACCCCA GTGCCACGTT GTGACTTGGA TAGTTGTGGA  
TCTATGTGGA CGTTTCCGCC GTGTTGGGGT CACGGTGCAA CACTCAACCT ATCAACACCT

4681 AAGAGTCAAA TGGCTCTCCT CAAGCGTATT CAACAAGGGG CTGAAGGATG CCCAGAAGGT  
TTCTCAGTTT ACCGAGAGGA GTTCGCATAA GTTGTTCCTT GACTTCCTAC GGGTCTTCCA

4741 ACCCATTTGT ATGGGATCTG ATCTGGGGCC TCGGTGCACA TGCTTTACAT GTGTTTAGTC  
TGGGGTAACA TACCCTAGAC TAGACCCCGG AGCCACGTGT ACGAAATGTA CACAAATCAG

FIG 1D

4801 GAGGTTAAAA AAACGTCTAG GCCCCCGGAA CCACGGGGAC GTGGTTTTCC TTTGAAAAAC  
CTCCAATTTT TTTGCAGATC CGGGGGGCTT GGTGCCCCTG CACCAAAAGG AAACTTTTTG  
4861 ACGATAATAC CATGGGTAAG TGATATCTAC TAGTTGTGAC CGGCGCCTAG TGTGACAAT  
TGCTATTATG GTACCCATTG ACTATAGATG ATCAACACTG GCCGCGGATC ACAACTGTTA  
4921 TAATCATCGG CATACTATAT CGGCATAGTA TAATACGACT CACTATAGGA GGGCCACCAT  
ATTAGTAGCC GTATCATATA GCCGTATCAT ATTATGCTGA GTGATATCCT CCCGGTGGTA  
4981 GTCGACTACT AACCTTCTTC TCTTTCCTAC AGCTGAGATC ACCGGTAGGA GGGCCATCAT  
CAGCTGATGA TTGGAAGAAG AGAAAGGATG TCGACTCTAG TGGCCATCCT CCCGGTAGTA  
5041 GAAAAAGCCT GAACCTACCG CGACGTCTGT CGCGAAGTTT CTGATCGAAA AGTTCGACAG  
CTTTTTTCGGA CTTGAGTGGC GCTGCAGACA GCGCTTCAAA GACTAGCTTT TCAAGCTGTC  
5101 CGTCTCCGAC CTGATGCAGC TCTCGGAGGG CGAAGAATCT CGTGCTTTCA GCTTCGATGT  
GCAGAGGCTG GACTACGTCG AGAGCCTCCC GCTTCTTAGA GCACGAAAGT CGAAGCTACA  
5161 AGGAGGGCGT GGATATGTCC TGCGGGTAAA TAGCTGCGCC GATGGTTTCT ACAAAGATCG  
TCCTCCCGCA CCTATACAGG ACGCCCATTT ATCGACGCGG CTACCAAAGA TGTTTCTAGC  
5221 TTATGTTTTAT CGGCACCTTG CATCGGCCCG GCTCCCGATT CCGGAAGTGC TTGACATTGG  
AATACAAATA GCCGTGAAAC GTAGCCGGCG CGAGGGCTAA GGCCTTCACG AACTGTAACC  
5281 GGAATTCAGC GAGAGCCTGA CCTATTGCAT CTCCCGCCGT GCACAGGGTG TCACGTTGCA  
CCTTAAGTCG CTCTCGGACT GGATAACGTA GAGGGCGGCA CGTGTCCCAC AGTGCAACGT  
5341 AGACCTGCCT GAAACCGAAC TGCCCGCTGT TCTGCAACCC GTGCGGAGC TCATGGATGC  
TCTGGACGGA CTTTGGCTTG ACGGGCGACA AGACGTTGGG CAGCGCCTCG AGTACCTACG  
5401 GATCGCTGCG GCCGATCTTA GCCAGACGAG CGGGTTCGGC CCATTCCGAC CGCAAGGAAT  
CTAGCGACGC CGGCTAGAAT CGGTCTGCTC GCGCAAGCCG GGTAAAGCCTG GCGTTCCTTA  
5461 CGGTCAATAC ACTACATGGC GTGATTTTCT ATGCGCGATT GCTGATCCCC ATGTGTATCA  
GCCAGTTATG TGATGTACCG CACTAAAGTA TACGCGCTAA CGACTAGGGG TACACATAGT  
5521 CTGGCAAACGT GTGATGGACG ACACCGTCAG TGCGTCCGTC GCGCAGGCTC TCGATGAGCT  
GACCGTTTGA CACTACCTGC TGTGGCAGTC ACGCAGGCAG CGCGTCCGAG AGCTACTCGA  
5581 GATGCTTTTG GCCGAGGACT GCGCCGAAGT CCGGCACCTC GTGCACGCGG ATTTCCGGCTC  
CTACGAAACC CGGCTCCTGA CCGGGCTTCA GGCCGTGGAG CACGTGCGCC TAAAGCCGAG  
5641 CAACAATGTC CTGACGGACA ATGGCCGCAT AACAGCGGTC ATTGACTGGA GCGAGGCGAT  
GTTGTTACAG GACTGCCTGT TACCGGCGTA TTGTGCGCCAG TAACTGACCT CGCTCCGCTA  
5701 GTTCGGGGAT TCCCAATACG AGGTGCGCAA CATCTTCTTC TGGAGGCCGT GGTGCGCTG  
CAAGCCCCTA AGGGTTATGC TCCAGCGGTT GTAGAAGAAG ACCTCCGGCA CCAACCGAAC  
5761 TATGGAGCAG CAGACGCGCT ACTTCGAGCG GAGGCATCCG GAGCTTGCAG GATCGCCGCG  
ATACCTCGTC GTCTGCGCGA TGAAGCTCGC CTCCGTAGGC CTCGAACGTC CTAGCGGCGC  
5821 GCTCCGGGCG TATATGCTCC GCATTGGTCT TGACCAACTC TATCAGAGCT TGTTTGACGG  
CGAGGCCCGC ATATACGAGG CGTAACCAGA ACTGGTTGAG ATAGTCTCGA ACCAACTGCC  
5881 CAATTTTCGAT GATGCAGCTT GGGCGCAGGG TCGATGCGAC GCAATCGTCC GATCCGGAGC  
GTTAAAGCTA CTACGTCGAA CCCGCGTCCC AGCTACGCTG CATTAGCAGG CTAGGCCTCG  
5941 CCGGACTGTC GGGCGTACAC AAATCGCCCC CAGAAGCGCG GCCGTCTGGA CCGATGGCTG  
GCCCTGACAG CCCGCTATGT TTTAGCGGGC GTCTTCGCGC CGGCAGACCT GGCTACCGAC  
6001 TGTAAGAAGTC GCGTCTGCGT TCGACCAGGC TGCGCGTTCT CCGCGCCATA GCAACCGAGC  
ACATCTTCAG CGCAGACGCA AGCTGGTCCG ACGCGCAAGA GCGCCGGTAT CGTTGGCTGC  
6061 TACGGCGTTG CCGCCTCGCC GGCAGCAAGA AGCCACGGAA GTCCGCCCCG AGCAGAAAAT  
ATGCCGCAAC GCGGGAGCGG CCGTCGTTCT TCGGTGCCTT CAGGCGGGCC TCGTCTTTTA  
6121 GCCCACGCTA CTGCGGGTTT ATATAGACGG TCCCCACGGG ATGGGGAAAA CCACCACCAC  
CGGGTGCGAT GACGCCCAAA TATATCTGCC AGGGGTGCCC TACCCCTTTT GGTGGTGGTG

FIG 1E

**SELECTION SYSTEMS FOR GENETICALLY  
MODIFIED CELLS**

DOCKET NO. 24751-2502

Applicant: Jensen

Filed: April 30, 2001

6181	GCAACTGCTG	GTGGCCCTGG	GTTCCGCGGA	CGATATCGTC	TACGTACCCG	AGCCGATGAC
	CGTTGACGAC	CACCGGGACC	CAAGCGCGCT	GCTATAGCAG	ATGCATGGGC	TCGGCTACTG
6241	TTACTGGCGG	GTGCTGGGGG	CTTCCGAGAC	AATCGCGAAC	ATCTACACCA	CACAACACCG
	AATGACCGCC	CACGACCCCC	GAAGGCTCTG	TTAGCGCTTG	TAGATGTGGT	GTGTTGTGGC
6301	CCTCGACCAG	GGTGAGATAT	CGGCCGGGGA	CGCGGCGGTG	GTAATGACAA	GCGCCCAGAT
	GGAGCTGGTC	CCACTCTATA	GCCGGCCCCCT	GCGCGCCAC	CATTACTGTT	CGCGGGTCTA
6361	AACAATGGGC	ATGCCTTATG	CCGTGACCGA	CGCCGTTCTG	GCTCCTCATA	TCGGGGGGGA
	TTGTTACCCG	TACCGAATAC	GGCACTGGCT	GCGGCAAGAC	CGAGGAGTAT	AGCCCCCCT
6421	GGCTGGGAGC	TCACATGCCC	CGCCCCCGGC	CCTCACCCCTC	ATCTTCGACC	GCCATCCCAT
	CCGACCCCTG	AGTGTACGGG	GCGGGGGCCG	GGAGTGGGAG	TAGAAGCTGG	CGGTAGGGTA
6481	CGCCGCCCTC	CTGTGCTACC	CGGCCGCGCG	GTACCTTATG	GGCAGCATGA	CCCCCAGGC
	GCGGCGGGAG	GACACGATGG	GCCGGCGCGC	CATGGAATAC	CCGTCTGACT	GGGGGGTCCG
6541	CGTGCTGGCG	TTCGTGGCCC	TCATCCCGCC	GACCTTGCCC	GGCACCAACA	TCGTGCTTGG
	GCACGACCGC	AAGCACCGGG	AGTAGGGCGG	CTGGAACGGG	CCGTGGTTGT	AGCACGAACC
6601	GGCCCTTCCG	GAGGACAGAC	ACATCGACCG	CCTGGCCAAA	CGCCAGCGCC	CCGGCGAGCG
	CCGGGAAGGC	CTCCTGTCTG	TGTAGCTGGC	GGACCGGTTT	GCGGTCGCGG	GGCCGCTCCG
6661	GCTGGACCTG	GCTATGCTGG	CTGCGATTTC	CCGCGTTTAC	GGGCTACTTG	CCAATACGGT
	CGACCTGGAC	CGATACGACC	GACGCTAAGC	GGCGCAAATG	CCCGATGAAC	GGTTATGCCA
6721	GCGGTATCTG	CAGTGC GGCG	GGTCTGGCGG	GGAGGACTGG	GGACAGCTTT	CGGGGACGGC
	CGCCATAGAC	GTACGCGCGC	CCAGCACCGC	CCTCCTGACC	CCTGTCGAAA	GCCCCTGCCG
6781	CGTGCCGCCC	CAGGGTGCCG	AGCCCCAGAG	CAACGCGGGC	CCACGACCCC	ATATCGGGGA
	GCACGGCGGG	GTCCCACGGC	TCGGGTCTC	GTTGCGCCCG	GGTGCTGGGG	TATAGCCCCT
6841	CACGTTATTT	ACCCTGTTTC	GGGCCCCCGA	GTTGCTGGCC	CCCAACGGCG	ACCTGTATAA
	GTGCAATAAA	TGGGACAAAG	CCCGGGGGCT	CAACGACCGG	GGGTTGCCCG	TGGACATATT
6901	CGTGTTTGCC	TGGGCCTTGG	ACGTCTTGCC	CAAACGCCTC	CGTTCCATGC	ACGTCTTTAT
	GCACAAACGG	ACCCGGAACC	TGCAGAACCG	GTTTGCGGAG	GCAAGGTACG	TGCAGAAATA
6961	CCTGGATTAC	GACCAATCGC	CCGCCGGCTG	CCGGGACGCC	CTGCTGCAAC	TTACCTCCCG
	GGACCTAATG	CTGGTTAGCG	GCGGGCCGAC	GGCCCTGCGG	GACGACCTTG	AATGGAGGCC
7021	GATGGTCCAG	ACCCACGTCA	CCACCCCGGG	CTCCATACCG	ACGATATGCG	ACCTGGCGCG
	CTACCAGGTC	TGGGTGCACT	GGTGGGGGCC	GAGGTATGGC	TGCTATACCG	TGGACCGCGC
7081	CACGTTTGCC	CGGGAGATGG	GGGAGGCTAA	CTGAGTCGAG	AATTCGCTAG	AGGGCCCTAT
	GTGCAAACGG	GCCCTCTACC	CCCTCCGATT	GA CTCAGCTC	TTAAGCGATC	TCCCGGGATA
7141	TCTATAGTGT	CACCTAAATG	CTAGAGCTCG	CTGATCAGCC	TCGACTGTGC	CTTCTAGTTG
	AGATATCACA	GTGGATTTAC	GATCTCGAGC	GA CTAGTCCG	AGCTGACACG	GAAGATCAAC
7201	CCAGCCATCT	GTTGTTTGCC	CCTCCCCCGT	GCCTTCCTTG	ACCCTGGAAG	GTGCCACTCC
	GGTCCGTAGA	CAACAAACGG	GGAGGGGGCA	CGGAAGGAAC	TGGGACCTTC	CACGGTGAGG
7261	CACTGTCCTT	TCCTAATAAA	ATGAGGAAAT	TGCATCGCAT	TGTCTGAGTA	GGTGTCAATC
	GTGACAGGAA	AGGATTATTT	TACTCTTTTA	ACGTAGCGTA	ACAGACTCAT	CCACAGTAAG
7321	TATTCTGGGG	GGTGGGGTGG	GGCAGGACAG	CAAGGGGGAG	GATTGGGAAG	ACAATAGCAG
	ATAAGACCCC	CCACCCACCC	CCGTCTCTGC	GTTCCCCCTC	CTAACCCCTC	TGTTATCGTC
7381	GCATGCGCAG	GGCCCAATTG	CTCGAGCGGC	CGCAATAAAA	TATCTTTATT	TTCATTACAT
	CGTACGCGTC	CCGGGTTAAC	GAGCTCGCCG	GCGTTATTTT	ATAGAAATAA	AAGTAATGTA
7441	CTGTGTGTTG	GTTTTTTTGT	TGAATCGTAA	CTAACATACG	CTCTCCATCA	AAACAAAACG
	GACACACAAC	CAAAAAACAC	ACTTAGCATT	GATTGTATGC	GAGAGGTAGT	TTTGTTTTGC
7501	AAACAAAACA	AACTAGCAAA	ATAGGCTGTC	CCCAGTGCAA	GTGCAGGTGC	CAGAACATTT
	TTTGTTTTGT	TTGATCGTTT	TATCCGACAG	GGGTCACGTT	CACGTCCACG	GTCTTGTAAG

FIG 1F

SELECTION SYSTEMS FOR GENETICALLY  
MODIFIED CELLS

DOCKET NO. 24751-2502

Applicant: Jensen

Filed: April 30, 2001

7561 CTCTATCGAA GGATCTGCGA TCGCTCCGGT GCCCGTCAGT GGGCAGAGCG CACATCGCCC  
GAGATAGCTT CCTAGACGCT AGCGAGGCCA CGGGCAGTCA CCCGTCTCGC GTGTAGCGGG  
7621 ACAGTCCCCG AGAAGTTGGG GGGAGGGGTC GGCAATTGAA CCGGTGCCTA GAGAAGGTGG  
TGTCAGGGGC TCTTCAACCC CCTCCCCAG CCGTTAACTT GGCCACGGAT CTCTTCCACC  
7681 CGCGGGGTAA ACTGGGAAAG TGATGTCGTG TACTGGCTCC GCCTTTTTTC CGAGGGTGGG  
GCGCCCCATT TGACCCTTTC ACTACAGCAC ATGACCGAGG CGGAAAAAGG GCTCCCACCC  
7741 GGAGAACCGT ATATAAGTGC AGTAGTCGCC GTGAACGTTT TTTTTCGCAA CGGGTTTGCC  
CCTCTTGGCA TATATTACG TCATCAGCGG CACTTGCAAG AAAAAGCGTT GCCCAAACGG  
7801 GCCAGAACAC AGCTGAAGCT TCGAGGGGCT CGCATCTCTC CTTACAGCGC CCGCCGCCCT  
CGGTCTTGTG TCGACTTCGA AGCTCCCCGA GCGTAGAGAG GAAGTGCGCG GCGGCGGGGA  
7861 ACCTGAGGCC GCCATCCAG CCGGTTGAGT CGCGTTCTGC CGCCTCCCGC CTGTGGTGCC  
TGGACTCCGG CCGTAGGTGC GGCCAACTCA GCGCAAGACG GCGGAGGGCG GACACCACGG  
7921 TCCTGAACTG CGTCCGCCGT CTAGGTAAGT TTAAAGCTCA GGTGAGACC GGGCCTTTGT  
AGGACTTGAC GCAGGCGGCA GATCCATTCA AATTTGAGT CCAGCTCTGG CCCGGAACA  
7981 CCGGCGCTCC CTTGGAGCCT ACCTAGACTC AGCCGGCTCT CCACGCTTTG CCTGACCCTG  
GGCCGCGAGG GAACCTCGGA TGGATCTGAG TCGGCCGAGA GGTGCGAAAC GGACTGGGAC  
8041 CTTGCTCAAC TCTACGTCTT TGTTTCGTTT TCTGTTCTGC GCCGTTACAG ATCCAAGCTG  
GAACGAGTTG AGATGCAGAA ACAAAGCAAA AGACAAGACG CGGCAATGTC TAGGTTGAC  
8101 TGACCGGCGC CTACGTAAGT GATATCTACT AGATTTATCA AAAAGAGTGT TGACTTGTGA  
ACTGGCCGCG GATGCATTCA CTATAGATGA TCTAAATAGT TTTTCTCACA ACTGAACACT  
8161 GCGCTCACAA TTGATACTTA GATTCATCGA GAGGGACACG TCGACTACTA ACCTTCTTCT  
CGCGAGTGTT AACTATGAAT CTAAGTAGCT CTCCCTGTGC AGCTGATGAT TGGGAAGAAGA  
8221 CTTTCCTACA GCTGAGAT  
GAAAGGATGT CGACTCTA